UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,566	03/20/2001	Aneesh Dalvi	PAT 232-2	9238

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EXAMINER
ODOM, CURTIS B

ART UNIT	PAPER NUMBER
2634	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	**Applicant(s)**
Office Action Summary	09/811,566	DALVI ET AL.
	Examiner	**Art Unit**	
	Curtis B. Odom	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 March 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-35</u> is/are pending in the application.

    4a) Of the above claim(s) <u>23-33</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-22,34 and 35</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 March 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 17-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hawkins et al.

(U. S. Patent No. 5, 721, 872).

Regarding claim 17, Hawkins et al. discloses in a modem (Fig. 3, Abstract, column 5,

lines 23-column 6, lines 66) having configurable means for converting of data into formatted

data packages and programmable control means for controlling the configurable data conversion

means, a method of controlling the conversion of data comprising:

configuring (Fig. 3, block 50, column 5, line 52-column 6, line 66) the configurable data

conversion means in accordance with at least one communication standard;

selecting (column 5, lines 51-63) one of the at least one communication standards,

wherein the system operator selects the communication standard; and

programming (column 5, line 51-column 6, line 66) the programmable control means (Fig. 3, block 48) in accordance with the selected communication standard to control the configurable data conversion means.

Regarding claim 18, which inherits the limitations of claim 17, Hawkins et al. discloses using the programmed control means to determine a communication time schedule (Fig. 3, block 48, column 6, lines 8-28), wherein controlling signal/communication timing determines a communication time schedule.

Regarding claim 19, which inherits the limitations of claim 17, Hawkins et al. discloses using the programmed control means to control the configured data conversion means (Fig. 3, block 48, column 6, lines 8-28).

Regarding claim 20, Hawkins et al. discloses in a modem (Fig. 3, Abstract, column 5, lines 23-column 6, lines 66) having configurable means for extraction of data from formatted data packages and programmable control means for controlling the configurable data extraction means, a method of controlling the extraction of data comprising:

configuring (Fig. 3, block 42, column 5, line 52-column 6, line 66) the configurable data extraction means in accordance with at least one communication standard;

selecting (column 5, lines 51-63) one of the at least one communication standards, wherein the system operator selects the communication standard; and

programming (column 5, line 51-column 6, line 66) the programmable control means (Fig. 3, block 48) in accordance with the selected communication standard to control the configurable data extraction means.

Regarding claim 21, which inherits the limitations of claim 20, Hawkins et al. discloses using the programmed control means to determine a communication time schedule (Fig. 3, block 48, column 6, lines 8-28), wherein controlling signal/communication timing determines a communication time schedule.

Regarding claim 22, which inherits the limitations of claim 20, Hawkins et al. discloses using the programmed control means to control the configured data extraction means (Fig. 3, block 48, column 6, lines 8-28).

3.   Claims 1, 2, 8, 9, 34, and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Khelghatti et al. (U. S. Patent No. 5, 877, 906).

Regarding claim 1, Khelghatti et al. discloses an air interface processor for a modem, comprising:

an event scheduling unit (Fig. 16A, block 156, column 18, lines 36-52) for scheduling the processing, by at least one data processing unit in the modem, of data to be transmitted by the modem; and

a control unit (Fig. 16A, block 158, column 18, line 52-column 19, line 15) for receiving instructions from the event scheduling unit and determining commands to send to the at least one data processing unit.

Regarding claim 2, which inherits the limitations of claim 1, Khelghatti et al. discloses the at least one data processing unit is a frame formatter (Fig. 16A, block 104, column 15, lines 7-25).

Regarding claim 8, Khelghatti et al. discloses an air interface processor for a modem, comprising:

an event scheduling unit (Fig. 16A, block 156, column 18, lines 36-52) for scheduling the

processing, by at least one data processing unit in the modem, of data received by the modem;

and

a control unit (Fig. 16A, block 158, column 18, line 52-column 19, line 15) for receiving

instructions from the event scheduling unit and determining commands to send to the at least one

data processing unit.

Regarding claim 9, which inherits the limitations of claim 8, Khelghatti et al. discloses

the at least one data processing unit is a frame defromatter (Fig. 16A, block 132, column 16, line

60-column 17, line 20).

Regarding claim 34, Khelghatti et al. discloses a modem (Fig. 1, block 22) comprising:

a modulator (column 5, lines 21-35); and

an interface processor (Fig. 16A) for the modulator,

the air interface processor having an event scheduling unit (Fig. 16A, block 156, column

18, lines 36-52) for scheduling the processing, by at least one data processing unit in the modem,

of data to be transmitted by the modem; and a control unit (Fig. 16A, block 158, column 18, line

52-column 19, line 15) for receiving instructions from the event scheduling unit and determining

commands to send to the at least one data processing unit.

Regarding claim 35, Khelghatti et al. discloses a modem (Fig. 1, block 22) comprising:

a demodulator (column 5, lines 21-35); and

an interface processor (Fig. 16A) for the demodulator,

the air interface processor having an event scheduling unit (Fig. 16A, block 156, column

18, lines 36-52) for scheduling the processing, by at least one data processing unit in the modem,

of data received by the modem; and a control unit (Fig. 16A, block 158, column 18, line 52-

column 19, line 15) for receiving instructions from the event scheduling unit and determining

commands to send to the at least one data processing unit.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 3-7 and 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Khelghatti et al. (U. S. Patent No. 5, 877, 906).

Regarding claims 3 and 10, Khelghatti et al. does not disclose the at least one data

processing unit further comprises a forward error correction unit. However, Khelghatti et al.

discloses the frames are configured to be compatible with forward error correction standards

(column 6, lines 60-63). Therefore, it would have been obvious to one of ordinary skill in the art

at the time the invention was made that forward error correction unit could have been

implemented into the interface to reduce error during transmission/reception of the frames.

Regarding claims 4 and 11, Khalghatti et al. does not disclose the control unit is a

microsequencer. However, it would have been obvious to one or ordinary skill in the art at the

time the invention was made that a microsequencer or any other device could have been

implemented in the place of the control unit as disclosed by Khalghatti et al. as long as the

device performed the same function as the control unit. Thus, implementing a microsequencer to perform the function of the control unit is deemed a design choice and does not constitute patentability.

Regarding claims 5-7 and 12-14, Khalghatti et al. does not disclose the event scheduling unit, control unit, or frame formatter/deformatter is programmable or configurable. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the functions of these devices in software to allow each device to be programmable or configurable. The implemented software would perform the same function of the hardware for less expense, greater adaptability, and greater flexibility. Therefore, it would have been obvious to have used the software in order to reduce cost and improve the adaptability and flexibility of the communication system.

Regarding claim 15, Khalghatti et al. discloses a method of processing data in a modem, comprising:

scheduling (Fig. 16A, block 156, column 18, lines 36-52) the processing of data for transmission by the modem;

transmitting (Fig. 16A, block 156, column 18, lines 36-52) the schedule to a control unit; and

sending (Fig. 16A, block 158, column 18, line 52-column 19, line 15) commands to a frame formatter to build a frame of data in accordance with a program of the control unit.

Khalghatti et al. does not disclose the control unit is a microsequencer. However, it would have been obvious to one or ordinary skill in the art at the time the invention was made that a microsequencer or any other device could have been implemented in the place of the

control unit as disclosed by Khalghatti et al. as long as the device performed the same function as

the control unit. Thus, implementing a microsequencer to perform the function of the control

unit is deemed a design choice and does not constitute patentability.

Regarding claim 16, Khalghatti et al. discloses a method of processing data in a modem,

comprising:

scheduling (Fig. 16A, block 156, column 18, lines 36-52) the processing of data reception

by the modem;

transmitting (Fig. 16A, block 156, column 18, lines 36-52) the schedule to a control unit;

and

sending (Fig. 16A, block 158, column 18, line 52-column 19, line 15) commands to a

frame deformatter to extract data from a fram of data in accordance with a program of the control

unit.

Khalghatti et al. does not disclose the control unit is a microsequencer. However, it

would have been obvious to one or ordinary skill in the art at the time the invention was made

that a microsequencer or any other device could have been implemented in the place of the

control unit as disclosed by Khalghatti et al. as long as the device performed the same function as

the control unit. Thus, implementing a microsequencer to perform the function of the control

unit is deemed a design choice and does not constitute patentability.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

        Bass et al. (U. S. Patent No. 6, 769, 033) and Kroeger et al. (U. S. Patent No. 6, 721, 337)

both disclose interfaces including scheduling units and a frame formatter/deformatter.

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The

examiner can normally be reached on Monday- Friday, 8-5.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

        Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom

May 18, 2005

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